

IN THE CLAIMS

Please amend claims 20, 25, 32, 33, and 35-37, as shown below. Claims 1-19 were previously canceled. The following listing of claims replaces all prior listings.

1-19. (Canceled).

20. (Currently amended) A method of detecting a target biomolecule in a sample comprising:

(a) forming a complex comprising a target biomolecule and a sensitizer-linked substrate molecule capable of recognizing the target biomolecule by contacting a the target biomolecule with a the sensitizer-linked substrate molecule;

(b) irradiating the complex to cause an emission signal from the sensitizer;

~~that recognizes the target biomolecule so that a biomolecule-sensitizer-linked-substrate complex is formed and~~

(c) detecting determining the presence of the complex by the signal emitted by the sensitizer to detect the target biomolecule.

21. (Original) The method of claim 20, wherein said substrate moiety is a binding element of the target biomolecule.

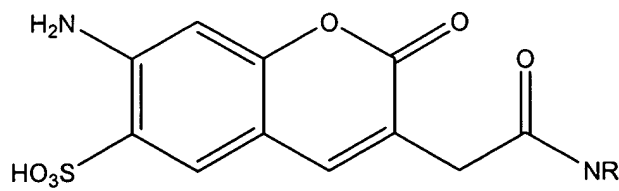
22. (Original) The method of claim 20, wherein said sensitizer is located at or near the surface of the target biomolecule when the substrate moiety of the sensitizer-linked substrate molecule is bound to the target biomolecule.

23. (Original) The method of claim 20, wherein, said biomolecule is a metalloprotein.

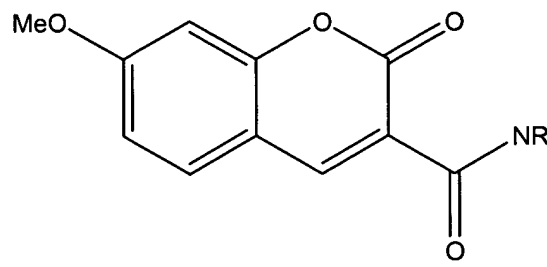
24. (Original) The method of claim 23, wherein, said metalloprotein is a heme protein.
25. (Currently amended) The method of claim 23, wherein, said the said biomolecule is ~~C~~cytochrome P450.
26. (Original) The method of claim 20, wherein, said sensitizer is a photosensitizer.
27. (Original) The method of claim 26, wherein, said photosensitizer is $\text{Ru}(\text{bpy})_3^{2+}$.
28. (Original) The molecule of claim 27, wherein, said $\text{Ru}(\text{bpy})_3^{2+}$ complex is the Δ or Λ enantiomer.
29. (Original) The molecule of claim 26, where said photosensitizer is selected from the group $[\text{Ru}(\text{phen})_2\text{dppz}]^{2+}$ or $[\text{Ru}(\text{phen})_2\text{dppa}]^{2+}$.
30. (Original) The molecule of claim 26, wherein, said photosensitizer is a coumarin molecule.
31. (Original) The molecule of claim 20, wherein, said linker is a molecule of sufficient length to allow the substrate to bind to the active site of the biomolecule so that upon binding the sensitizer is located at or near the surface of the target biomolecule.
32. (Currently amended) The method of claim 20, wherein, said linker is an alkyl chain, $(\text{CH}_2)_n$, wherein $n[[+]] \equiv 1-13$.
- 33 (Currently amended) The method of claim 20, wherein, said substrate is a molecule that binds to the active site of ~~C~~cytochrome ~~P350~~ P450.

34. (Original) The method of claim 33, wherein the said substrate is selected from the group consisting of adamantane (Ad), ethylbenzene (EB), imidazole (Im).

35. (Currently amended) The method of claim 26, wherein, the said sensitizer-linked substrate molecule is selected from the group consisting of 4-, 6-, 7-, substituted coumarins ~~classes A and B~~, as shown in ~~Figure 51~~. by structures (I) and (II):

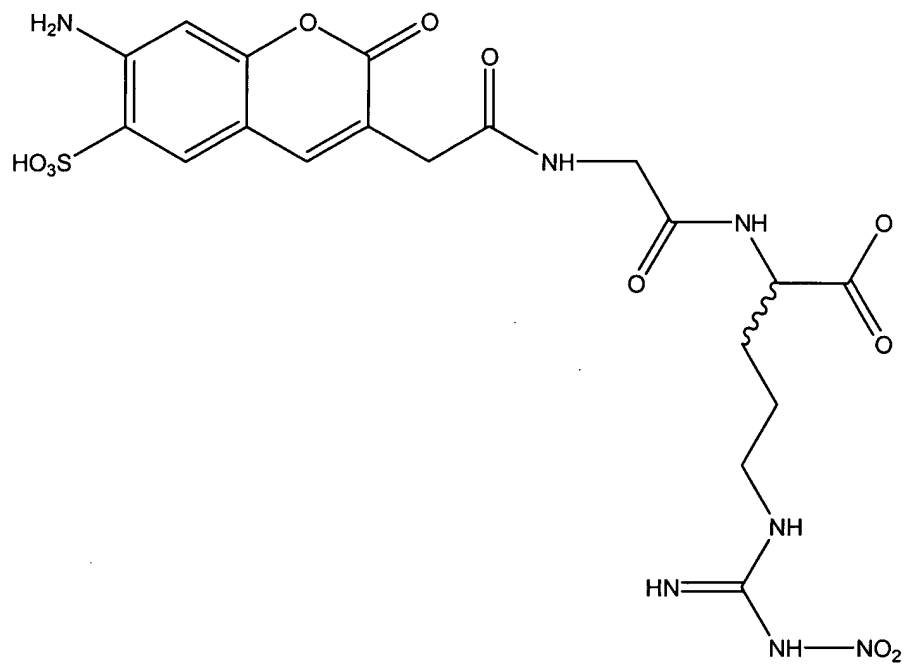


(I)

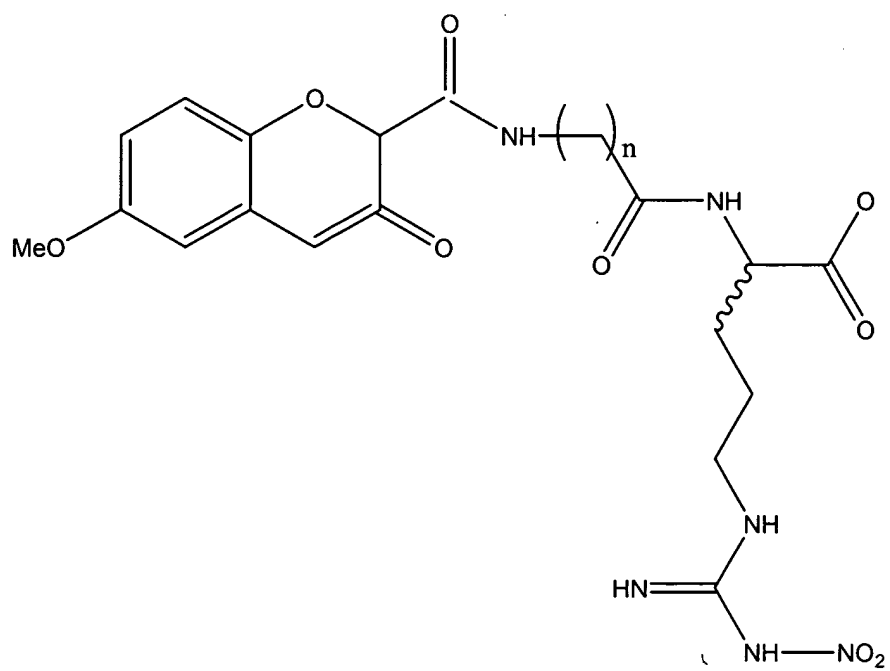


(II)

36. (Currently amended) The method of claim 26, wherein, the said sensitizer-linked substrate molecule is selected from the group consisting of compounds ~~classes C and D~~, as shown in ~~Figure 54~~. by structures (III) and (IV):



(III)



(IV)

37. (Currently amended) A method of identifying an agent of interest that modulates a target biomolecule activity in a sample comprising:

(a) ~~contacting said~~ forming an adduct comprising the target biomolecule and a sensitizer-linked substrate molecule;

(b) contacting the adduct with the agent of interest to form a complex; and

(c) irradiating the complex to cause an emission signal from the sensitizer; and

(~~b~~) (d) detecting the signal emitted by the ~~free~~ sensitizer-linked substrate molecule and/or by the complex a signal resulting from a combination of the biomolecule and sensitizer-linked substrate to identify the agent of interest, the change in the signal being indicative that the agent of interest modulates the target biomolecule in the sample.